GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: November 6, 2004, 19:23:00 ; Search time 87.7188 Seconds
(without alignments)
28.627 Million cell updates/sec

Title: US-10-618-644-2
Perfect score: 42
Sequence: 1 PNNKPFQ 7

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2002273 seqs, 358729299 residues

Total number of hits satisfying chosen parameters: 2002273

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_23Sep04:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	42	100.0	7	5	ABB81804	Abb81804 Soybean a
2	42	100.0	87	2	AAY40984	Aay40984 Soybean g
3	42	100.0	87	2	AAY40983	Aay40983 Soybean g
4	42	100.0	128	8	ADO60334	Ado60334 Cholester
5	42	100.0	291	8	ADO60333	Ado60333 Cholester
6	42	100.0	481	5	ABG71266	Abg71266 Glycine m
7	42	100.0	481	7	ADH89253	Adh89253 G. max gl
8	42	100.0	481	7	ADL90187	Adl90187 Soybean g
9	42	100.0	481	8	ADG43988	Adg43988 G. max gl
10	42	100.0	484	2	AAY40949	Aay40949 Soybean g
11	42	100.0	485	5	ABG71265	Abg71265 Glycine m
12	42	100.0	485	6	ABU52502	Abu52502 Soybean g
13	42	100.0	485	7	ADG27563	Adg27563 Soybean G
14	42	100.0	485	7	ADH89247	Adh89247 G. max gl
15	42	100.0	485	7	ADL90186	Adl90186 Soybean g
16	42	100.0	485	8	ADG43982	Adg43982 G. max gl
17	42	100.0	495	3	AAY80994	Aay80994 Soybean g
18	42	100.0	495	4	AAE10365	Aae10365 Soybean g
19	42	100.0	495	5	ABG71264	Abg71264 Glycine m
20	42	100.0	495	7	ADH89245	Adh89245 G. max gl
21	42	100.0	495	7	ADL90168	Adl90168 Soybean g
22	42	100.0	495	8	ADG43980	Adg43980 G. max gl
23	42	100.0	511	7	ADL90190	Adl90190 Soybean g
24	38	90.5	235	4	ABG17977	Abg17977 Novel hum
25	37	88.1	37	1	AAP60882	Aap60882 Synthetic
26	37	88.1	37	2	AAY29709	Aay29709 Influenza
27	37	88.1	39	7	ADD88617	Add88617 Influenza
28	37	88.1	39	7	ADG18382	Adg18382 Influenza
29	37	88.1	47	7	ADD88616	Add88616 Influenza
30	37	88.1	47	7	ADG18381	Adg18381 Influenza
31	37	88.1	329	5	ABP53897	Abp53897 Influenza
32	37	88.1	329	5	ABP53896	Abp53896 Influenza
33	37	88.1	347	2	AAR63591	Aar63591 Stem regi
34	37	88.1	347	5	AAU76670	Aau76670 Influenza
35	37	88.1	363	5	ABP53895	Abp53895 Influenza
36	37	88.1	386	1	AAP40615	Aap40615 Sequence
37	37	88.1	565	1	AAP70711	Aap70711 Equine in
38	37	88.1	565	2	AAR04943	Aar04943 Equine he
39	37	88.1	565	2	AAW44946	Aaw44946 EIV Fonta
40	37	88.1	565	3	AAY70057	Aay70057 Cold-adap
41	37	88.1	565	3	AAY70056	Aay70056 Wild type
42	37	88.1	566	2	AAR63590	Aar63590 Full leng
43	37	88.1	566	2	AAW68406	Aaw68406 SIV strai
44	37	88.1	566	5	ABB05767	Abb05767 Influenza
45	37	88.1	566	5	ABB05774	Abb05774 Influenza

ALIGNMENTS

RESULT 1
ABB81804
ID ABB81804 standard; peptide; 7 AA.
XX
AC ABB81804;
XX
DT 23-SEP-2002 (first entry)
XX
DE Soybean angiotensin converting enzyme inhibitory peptide #2.
XX
KW Soybean; angiotensin converting enzyme inhibitor; hypertension;
KW hypotensive; taste.
XX
OS Glycine max.
XX
PN WO200255546-A1.
XX
PD 18-JUL-2002.
XX
PF 15-JAN-2002; 2002WO-JP000194.
XX
PR 16-JAN-2001; 2001JP-00007400.
PR 04-OCT-2001; 2001JP-00308974.
XX
PA (AJIN) AJINOMOTO CO INC.
XX
PI Kodera T, Nio N;
XX
DR WPI; 2002-520117/55.
XX
PT Peptides, useful as hypotensive agents or in health foods.
XX
PS Claim 1; Page 19; 43pp; Japanese.
XX
CC The invention relates to a novel set of peptides and their salts. The
CC peptides of the invention have hypotensive activity. The peptides are
CC used as hypotensive agents or in health foods, and have favourable taste.
CC The present sequence represents a peptide of the invention, having
CC angiotensin converting enzyme inhibitory activity
XX
SQ Sequence 7 AA;

Query Match 100.0%; Score 42; DB 5; Length 7;
Best Local Similarity 100.0%; Pred. No. 1.7e+06;
Matches 7; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PNNKPFQ 7
|||||||

```
Db          1 PNNKPFQ 7


RESULT 2
AAY40984
ID   AAY40984 standard; protein; 87 AA.
XX
AC   AAY40984;
XX
DT   06-DEC-1999  (first entry)
XX
DE   Soybean glycinin G2 precursor protein fragment.
XX
KW   Peanut; allergen; Ara H 1; IgE; immunoglobulin E; epitope; Ara h 3;
KW   allergic reaction; soybean; glycinin G2.
XX
OS   Glycine max.
XX
PN   WO9945961-A1.
XX
PD   16-SEP-1999.
XX
PF   12-MAR-1999;   99WO-US005494.
XX
PR   12-MAR-1998;   98US-0077763P.
PR   11-MAR-1999;   99US-00077763.
XX
PA   (UYAR-) UNIV ARKANSAS.
XX
PI   Burks W,  Helm RM,  Cockrell G,  Bannon GA,  Stanley JS,  Shin DS;
PI   Sampson H,  Compadre CM,  Huang SK,  Maleki SJ,  Kopper RA;
XX
DR   WPI; 1999-551218/46.
XX
PT   Tertiary structure of peanut allergen Ara h 1 for protection of a host
PT   animal from allergic reaction.
XX
PS   Disclosure; Fig 12; 193pp; English.
XX
CC   The invention provides a tertiary structure for the peanut allergen Ara H
CC   1. The Ara H 1 allergen is found to contain 23 linear IgE-binding
CC   epitopes. The invention also provides an isolated recombinant peanut
CC   allergen designated Ara h 3 and a nucleotide molecule encoding the peanut
CC   allergen Ara h 3. Molecules of the invention are used to protect a host
CC   animal from allergic reaction, particularly using a modified allergen
CC   which is less reactive with IgE. The invention may also be used to ensure
CC   that the allergen is not introduced into genetically modified food. The
CC   present sequence represents a soybean glycinin G2 precursor protein
CC   fragment
XX
SQ   Sequence 87 AA;

  Query Match             100.0%;  Score 42;  DB 2;  Length 87;
  Best Local Similarity   100.0%;  Pred. No. 4.2;
  Matches    7;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PNNKPFQ 7
              |||||||
Db         11 PNNKPFQ 17


RESULT 3
AAY40983
ID   AAY40983 standard; protein; 87 AA.
XX
AC   AAY40983;
XX
DT   06-DEC-1999  (first entry)
XX
DE   Soybean glycinin G1 precursor protein fragment.
XX
KW   Peanut; allergen; Ara H 1; IgE; immunoglobulin E; epitope; Ara h 3;
KW   allergic reaction; soybean; glycinin G1.
XX
OS   Glycine max.
XX
PN   WO9945961-A1.
XX
PD   16-SEP-1999.
XX
PF   12-MAR-1999;   99WO-US005494.
XX
PR   12-MAR-1998;   98US-0077763P.
PR   11-MAR-1999;   99US-00077763.
XX
PA   (UYAR-) UNIV ARKANSAS.
XX
PI   Burks W,  Helm RM,  Cockrell G,  Bannon GA,  Stanley JS,  Shin DS;
PI   Sampson H,  Compadre CM,  Huang SK,  Maleki SJ,  Kopper RA;
XX
DR   WPI; 1999-551218/46.
XX
PT   Tertiary structure of peanut allergen Ara h 1 for protection of a host
PT   animal from allergic reaction.
XX
PS   Disclosure; Fig 12; 193pp; English.
XX
CC   The invention provides a tertiary structure for the peanut allergen Ara H
CC   1. The Ara H 1 allergen is found to contain 23 linear IgE-binding
CC   epitopes. The invention also provides an isolated recombinant peanut
CC   allergen designated Ara h 3 and a nucleotide molecule encoding the peanut
CC   allergen Ara h 3. Molecules of the invention are used to protect a host
CC   animal from allergic reaction, particularly using a modified allergen
CC   which is less reactive with IgE. The invention may also be used to ensure
CC   that the allergen is not introduced into genetically modified food. The
CC   present sequence represents a soybean glycinin G1 precursor protein
CC   fragment
XX
SQ   Sequence 87 AA;

  Query Match             100.0%;  Score 42;  DB 2;  Length 87;
  Best Local Similarity   100.0%;  Pred. No. 4.2;
  Matches    7;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PNNKPFQ 7
              |||||||
Db         11 PNNKPFQ 17


RESULT 4
ADO60334
ID   ADO60334 standard; protein; 128 AA.
XX
AC   ADO60334;
XX
DT   15-JUL-2004  (first entry)
XX
DE   Cholesterol-reducing-related Fabales protein sequence SeqID4.
XX
KW   cholesterol reducing; antilipaemic; cholesterol level; food additive;
KW   beverage additive; fodder additive.
XX
OS   Fabales.
XX
PN   JP2004099447-A.
XX
PD   02-APR-2004.
XX
PF   04-SEP-2002; 2002JP-00259350.
XX
PR   04-SEP-2002; 2002JP-00259350.
XX
PA   (KYOW ) KYOWA HAKKO KOGYO KK.
XX
DR   WPI; 2004-289330/27.
XX
```

PT Novel peptide which has cholesterol reducing activity, useful for
PT reducing cholesterol levels in both humans and animals, and as a
PT food/beverage additive or fodder additive.
XX
PS Disclosure; SEQ ID NO 4; 20pp; Japanese.
XX
CC This invention relates to a novel peptide which has cholesterol reducing
CC activity. The invention is useful for the production of compounds with an
CC antilipaemic activity by reducing cholesterol levels. The peptide is
CC useful as a cholesterol reducing agent for reducing cholesterol levels in
CC both animals and humans. The peptide is also useful as food/beverage
CC additive or fodder additive. Thus the peptide is useful in the
CC maintenance of health in humans and animals. The peptide effectively
CC reduces cholesterol content in both humans and animals. The present
CC sequence is that of a Fabales-derived protein (partial) which is related
CC to the cholesterol-reducing peptides of the invention.
XX
SQ Sequence 128 AA;

Query Match 100.0%; Score 42; DB 8; Length 128;
Best Local Similarity 100.0%; Pred. No. 6.2;
Matches 7; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PNNKPFQ 7
|||||||
Db 38 PNNKPFQ 44

RESULT 5
ADO60333
ID ADO60333 standard; protein; 291 AA.
XX
AC ADO60333;
XX
DT 15-JUL-2004 (first entry)
XX
DE Cholesterol-reducing-related Fabales protein sequence SeqID3.
XX
KW cholesterol reducing; antilipaemic; cholesterol level; food additive;
KW beverage additive; fodder additive.
XX
OS Fabales.
XX
PN JP2004099447-A.
XX
PD 02-APR-2004.
XX
PF 04-SEP-2002; 2002JP-00259350.
XX
PR 04-SEP-2002; 2002JP-00259350.
XX
PA (KYOW) KYOWA HAKKO KOGYO KK.
XX
DR WPI; 2004-289330/27.
XX
PT Novel peptide which has cholesterol reducing activity, useful for
PT reducing cholesterol levels in both humans and animals, and as a
PT food/beverage additive or fodder additive.
XX
PS Disclosure; SEQ ID NO 3; 20pp; Japanese.
XX
CC This invention relates to a novel peptide which has cholesterol reducing
CC activity. The invention is useful for the production of compounds with an
CC antilipaemic activity by reducing cholesterol levels. The peptide is
CC useful as a cholesterol reducing agent for reducing cholesterol levels in
CC both animals and humans. The peptide is also useful as food/beverage
CC additive or fodder additive. Thus the peptide is useful in the
CC maintenance of health in humans and animals. The peptide effectively
CC reduces cholesterol content in both humans and animals. The present
CC sequence is that of a Fabales-derived protein (partial) which is related
CC to the cholesterol-reducing peptides of the invention.
XX
SQ Sequence 291 AA;

Query Match 100.0%; Score 42; DB 8; Length 291;
Best Local Similarity 100.0%; Pred. No. 14;
Matches 7; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PNNKPFQ 7
|||||||
Db 38 PNNKPFQ 44

RESULT 6
ABG71266
ID ABG71266 standard; protein; 481 AA.
XX
AC ABG71266;
XX
DT 17-DEC-2002 (first entry)
XX
DE Glycine max (Soybean) var. Dare protein.
XX
KW Soybean; Glycinin; atomic coordinate data; processability; soya protein;
KW Dare; protein co-ordinate data.
XX
OS Glycine max.
XX
PN JP2002193996-A.
XX
PD 10-JUL-2002.
XX
PF 21-DEC-2000; 2000JP-00405097.
XX
PR 21-DEC-2000; 2000JP-00405097.
XX
PA (KYOU) UNIV KYOTO.
XX
DR WPI; 2002-685438/74.
DR N-PSDB; ABS55193.
XX
PT Glycinin, beta-conglycinin and proglycinin, their crystal structures,
PT three dimensional coordinates, three dimensional structured and models
PT and their uses.
XX
PS Disclosure; Page 1273-1274; 1298pp; Japanese.
XX
CC The present invention relates to a new Glycinin characterised by the
CC atomic coordinate data fully defined in the specification. The structure
CC can be used for improving processability of soya protein. The present
CC amino acid sequence represents the Glycine max (Soybean) var. Dare
CC protein, as described in the specification
XX
SQ Sequence 481 AA;

Query Match 100.0%; Score 42; DB 5; Length 481;
Best Local Similarity 100.0%; Pred. No. 22;
Matches 7; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PNNKPFQ 7
|||||||
Db 57 PNNKPFQ 63

RESULT 7
ADH89253
ID ADH89253 standard; protein; 481 AA.
XX
AC ADH89253;
XX
DT 06-MAY-2004 (first entry)
XX
DE G. max glycinin G3 subunit.
XX
KW double stranded RNA; storage protein; 2S-albumen; 7S-globulin;
KW 11S/12S-globulin; zein-prolamine; homogentistate metabolic pathway;

KW pharmaceutical; plant; abiotic stress; fatty acid composition;
KW lipid composition; oil composition; carbohydrate composition; colour;
KW pigmentation; pathogen resistance; fruit ripening delay; aging;
KW male sterility; lignin; fibre; cotton; Vitamin E synthesis; nicotine;
KW caffeine; theophylline; threonine biosynthesis; glycinin.
XX
OS Glycine max.
XX
PN WO2003078629-A1.
XX
PD 25-SEP-2003.
XX
PF 17-MAR-2003; 2003WO-EP002735.
XX
PR 20-MAR-2002; 2002DE-01012892.
XX
PA (BADI) BASF PLANT SCI GMBH.
XX
PI Kock M, Bauer J;
XX
DR WPI; 2003-803889/75.
DR N-PSDB; ADH89252.
XX
PT Reducing expression of at least two target genes, useful e.g. for
PT producing transgenic plants, using partly double-stranded interfering
PT RNA.
XX
PS Disclosure; SEQ ID NO 28; 228pp; German.
XX
CC This invention describes a novel method for reducing the expression of at
CC least two different endogenous target genes in a eukaryotic cell or
CC organism by introducing an RNA molecule that is at least partly double
CC stranded. The transcribed RNAs from at least two target genes have
CC homology below 90% and the RNA molecule is formed as a single, self-
CC complementary molecule. At least one of the double-stranded structures
CC formed from individual sense sequences has an even number of repeats of
CC 21 or 22 bp. The RNA molecule may include an intron-encoding sequence. At
CC least two target genes are selected from different classes of storage
CC protein genes, i.e. 2S-albumen, 7S- or 11S/12S-globulins or zein-
CC prolamine and at least one of the sense sequences is identical to storage
CC protein sequences or genes in the homogentistate metabolic pathway or
CC enzyme types, e.g. acetyl transacylases, thioesterases, (de)branching
CC enzymes or cellulases. The RNA of the invention, also related cassettes,
CC expression systems, vectors and transgenic organisms are used for
CC preparation of pharmaceuticals, in biotechnological processes and plant
CC biotechnology, specifically in plants to improve protection against
CC abiotic stress, to modify composition and/or content of fatty acids,
CC lipids and oils, to modify carbohydrate composition, to alter colour or
CC pigmentation, to reduce content of storage proteins, to increase
CC resistance to pathogens, to inhibit stem break, to delay fruit ripening
CC or aging, to induce male sterility, to reduce content of toxic or
CC unwanted components, to modify lignification and/or lignin content, to
CC modify the fibre component in foods or fibre quality in cotton, to reduce
CC susceptibility to shock, to increase synthesis of Vitamin E, to reduce
CC contents of nicotine, caffeine or theophylline and to increase methionine
CC content, by reducing threonine biosynthesis. The method provides a rapid
CC and efficient way of reducing gene expression, can inhibit more than one
CC target gene, prevents development of multiple phenotypes (since the
CC transcription rate is the same for all RNA sequences, significantly
CC reducing the selection process required to produce an organism with
CC effective suppression of all target genes), avoids problems of epigenic
CC gene silencing, does not require synthesis of individual RNA sequences
CC and the method can be applied to plants with complex (polyploid) genomes.
CC No interference between the individual RNA sequences occur. This sequence
CC represents a protein encoded by a target gene used in the method of the
CC invention.
XX
SQ Sequence 481 AA;

Query Match 100.0%; Score 42; DB 7; Length 481;
Best Local Similarity 100.0%; Pred. No. 22;
Matches 7; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PNNKPFQ 7
|||||||
Db 57 PNNKPFQ 63

RESULT 8
ADL90187
ID ADL90187 standard; protein; 481 AA.
XX
AC ADL90187;
XX
DT 20-MAY-2004 (first entry)
XX
DE Soybean glycinin G3 protein.
XX
KW immunomodulator; immunotherapy; allergen characterisation;
KW immunoglobulin E; allergen sensitivity; soybean; glycinin G3;
KW acidic protein.
XX
OS Glycine max.
XX
PN US2003166518-A1.
XX
PD 04-SEP-2003.
XX
PF 12-JAN-2001; 2001US-00759967.
XX
PR 13-JAN-2000; 2000US-0175948P.
PR 03-MAR-2000; 2000US-0186724P.
XX
PA (BEAR/) BEARDSLEE T A.
PA (ZEEC/) ZEECE M G.
PA (SARA/) SARATH G.
PA (MARK/) MARKWELL J P.
XX
PI Beardslee TA, Zeece MG, Sarath G, Markwell JP;
XX
DR WPI; 2003-898094/82.
XX
PT Allergen characterization comprises obtaining a recombinant fusion
PT protein and detecting the binding of immunoglobulin E molecules in the
PT biological sample to the recombinant fusion protein.
XX
PS Disclosure; SEQ ID NO 21; 34pp; English.
XX
CC The invention describes a method of allergen characterisation comprising:
CC obtaining a recombinant fusion protein; attaching the recombinant fusion
CC protein to a substrate through the native protein; contacting the
CC recombinant fusion protein attached to the substrate with a biological
CC sample from an individual; and detecting the binding of immunoglobulin E
CC molecules in the biological sample to the recombinant fusion protein.
CC Also described are: a method for determining the sensitivity of an
CC individual to a suspected allergen; a method for determining the amount
CC of immunoglobulin E specific for an allergen in a biological sample; a
CC method of immunotherapy; a method of allergen characterisation; a method
CC for determining the sensitivity of an individual to a suspected allergen;
CC a method of determining the amount of immunoglobulin E specific for an
CC allergen in a biological sample; a kit comprising the recombinant fusion
CC protein and instructions for using the recombinant fusion protein to
CC determine IgE binding to the know or suspected allergen; and a method for
CC epitope determination. The method is useful for characterising allergens.
CC This is the amino acid sequence of soybean glycinin G2 acidic protein
CC that can be used to demonstrate the methods of the invention.
XX
SQ Sequence 481 AA;

Query Match 100.0%; Score 42; DB 7; Length 481;
Best Local Similarity 100.0%; Pred. No. 22;
Matches 7; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PNNKPFQ 7
|||||||
Db 57 PNNKPFQ 63

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RESULT 9
ADG43988
ID   ADG43988 standard; protein; 481 AA.
XX
AC   ADG43988;
XX
DT   26-FEB-2004  (first entry)
XX
DE   G. max glycinin G3 subunit protein.
XX
KW   oil content; plant; storage protein; seed-specific promoter; 2S-albumin;
KW   7S-globulin; 11S-globulin; 12S-globulin; zein-prolamine; transgenic;
KW   oil production; fat production; free fatty acid production; food;
KW   animal feed; pharmaceutical; fine chemical production; glycinin.
XX
OS   Glycine max.
XX
PN   WO2003077643-A2.
XX
PD   25-SEP-2003.
XX
PF   17-MAR-2003; 2003WO-EP002733.
XX
PR   20-MAR-2002; 2002DE-01012893.
XX
PA   (BADI ) BASF PLANT SCI GMBH.
XX
PI   Bauer J;
XX
DR   WPI; 2004-011485/01.
DR   N-PSDB; ADG43987.
XX
PT   Increasing total oil content of plants, useful e.g. as foods or animal
PT   feeds, by reducing amount of storage proteins, particularly with double-
PT   stranded interfering RNA.
XX
PS   Claim 4; SEQ ID NO 28; 253pp; German.
XX
CC   This invention describes a novel method for increasing the total oil
CC   content of a plant by reducing the amount of at least one storage protein
CC   in the plant (or its tissue, organs, parts or cells) and selecting plants
CC   that have higher total oil content than starting plants. The storage
CC   protein is suppressed by introducing antisense RNA, optionally combined
CC   with a ribozyme, sense RNA that induces co-suppression, DNA-binding
CC   factors directed against storage protein genes, viral sequences that
CC   degrade storage protein RNA, constructs that induce homologous
CC   recombination of endogenous storage protein genes or mutations into
CC   storage protein genes. Most preferably a plant cell is stably transfected
CC   with a recombinant expression construct, then regenerated to plants that
CC   express the incorporated sequence. The expression constructs particularly
CC   contain a seed-specific promoter and they are introduced into plants by
CC   standard methods, e.g. via Agrobacterium. The preferred storage proteins
CC   of the invention are 2S-albumens, 7S or 11S/12S-globulins or zein-
CC   prolamines. Transgenic organisms produced by the new method are used for
CC   production of oils, fats, free fatty acids or their derivatives, useful
CC   as foods, animal feeds, pharmaceuticals and fine chemicals. This sequence
CC   represents a storage protein used to illustrate the method of the
CC   invention.
XX
SQ   Sequence 481 AA;

  Query Match             100.0%;  Score 42;  DB 8;  Length 481;
  Best Local Similarity   100.0%;  Pred. No. 22;
  Matches    7;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PNNKPFQ 7
              |||||||
Db         57 PNNKPFQ 63


RESULT 10
AAY40949
ID   AAY40949 standard; protein; 484 AA.
XX
AC   AAY40949;
XX
DT   06-DEC-1999  (first entry)
XX
DE   Soybean glycinin protein A2B1A sequence.
XX
KW   Peanut; allergen; Ara H 1; IgE; immunoglobulin E; epitope; Ara h 3;
KW   allergic reaction; glycinin protein; A2B1A; soybean.
XX
OS   Glycine max.
XX
PN   WO9945961-A1.
XX
PD   16-SEP-1999.
XX
PF   12-MAR-1999;   99WO-US005494.
XX
PR   12-MAR-1998;   98US-0077763P.
PR   11-MAR-1999;   99US-00077763.
XX
PA   (UYAR-) UNIV ARKANSAS.
XX
PI   Burks W,  Helm RM,  Cockrell G,  Bannon GA,  Stanley JS,  Shin DS;
PI   Sampson H,  Compadre CM,  Huang SK,  Maleki SJ,  Kopper RA;
XX
DR   WPI; 1999-551218/46.
XX
PT   Tertiary structure of peanut allergen Ara h 1 for protection of a host
PT   animal from allergic reaction.
XX
PS   Disclosure; Page 67; 193pp; English.
XX
CC   The invention provides a tertiary structure for the peanut allergen Ara H
CC   1. The Ara H 1 allergen is found to contain 23 linear IgE-binding
CC   epitopes. The invention also provides an isolated recombinant peanut
CC   allergen designated Ara h 3 and a nucleotide molecule encoding the peanut
CC   allergen Ara h 3. Molecules of the invention are used to protect a host
CC   animal from allergic reaction, particularly using a modified allergen
CC   which is less reactive with IgE. The invention may also be used to ensure
CC   that the allergen is not introduced into genetically modified food. The
CC   present sequence represents a soybean glycinin protein A2B1A sequence
XX
SQ   Sequence 484 AA;

  Query Match             100.0%;  Score 42;  DB 2;  Length 484;
  Best Local Similarity   100.0%;  Pred. No. 23;
  Matches    7;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 PNNKPFQ 7
              |||||||
Db         54 PNNKPFQ 60


RESULT 11
ABG71265
ID   ABG71265 standard; protein; 485 AA.
XX
AC   ABG71265;
XX
DT   17-DEC-2002  (first entry)
XX
DE   Glycine max (Soybean) var. Shirotsurunoko protein #2.
XX
KW   Soybean; Glycinin; atomic coordinate data; processability; soya protein;
KW   Shirotsurunoko; protein co-ordinate data.
XX
OS   Glycine max.
XX
PN   JP2002193996-A.
XX
```

PD 10-JUL-2002.
XX
PF 21-DEC-2000; 2000JP-00405097.
XX
PR 21-DEC-2000; 2000JP-00405097.
XX
PA (KYOU) UNIV KYOTO.
XX
DR WPI; 2002-685438/74.
DR N-PSDB; ABS55192.
XX
PT Glycinin, beta-conglycinin and proglycinin, their crystal structures,
PT three dimensional coordinates, three dimensional structured and models
PT and their uses.
XX
PS Disclosure; Page 1269-1271; 1298pp; Japanese.
XX
CC The present invention relates to a new Glycinin characterised by the
CC atomic coordinate data fully defined in the specification. The structure
CC can be used for improving processability of soya protein. The present
CC amino acid sequence represents the Glycine max (Soybean) var.
CC Shirotsurunoko protein #2, as described in the specification
XX
SQ Sequence 485 AA;

Query Match 100.0%; Score 42; DB 5; Length 485;
Best Local Similarity 100.0%; Pred. No. 23;
Matches 7; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PNNKPFQ 7
|||||||
Db 54 PNNKPFQ 60

RESULT 12
ABU52502
ID ABU52502 standard; protein; 485 AA.
XX
AC ABU52502;
XX
DT 10-MAR-2003 (first entry)
XX
DE Soybean glycinin A2B1a protein.
XX
KW Soybean; allergy; Beta conglycinin; IgE binding site; glycinin A2B1a;
KW anaphylactic food allergen; antiallergenic; vaccine; wound healing.
XX
OS Glycine max.
XX
PN WO200274250-A2.
XX
PD 26-SEP-2002.
XX
PF 18-MAR-2002; 2002WO-US009108.
XX
PR 16-MAR-2001; 2001US-0276822P.
PR 18-MAR-2002; 2002US-00276822.
XX
PA (PANA-) PANACEA PHARM.
XX
PI Caplan M, Sosin H, Sampson H, Bannon GA, Burks WA, Cockrell G;
PI Compadre CM, Connaughton C, Helm RM, King NE, Kopper RA, Maleki SJ;
PI Rabjohn PA, Shin DS, Stanley JS;
XX
DR WPI; 2003-018765/01.
XX
PT New modified anaphylactic food allergen, useful for preventing or
PT treating allergic reactions associated with e.g. anaphylactic allergens.
XX
PS Example 20; Fig 79; 300pp; English.
XX
CC The invention relates to a modified anaphylactic food allergen has an
CC amino acid sequence that is substantially identical to that of natural
CC anaphylactic food allergen, except for a cysteine residue that has been
CC modified so that it cannot participate in the disulphide bond. The
CC modification may also comprise mutation of the IgE binding sites to
CC reduce allergenicity. Also included are: (1) a method of making a
CC modified anaphylactic food allergen; (2) a nucleotide molecule encoding
CC or for causing a site specific mutation in the modified anaphylactic food
CC allergen; (3) a transgenic plant or animal expressing the modified
CC anaphylactic food allergen; (4) a method of treating an individual by
CC reducing the clinical response to a natural anaphylactic food allergen;
CC and an isolated fragment of peanut allergen Ara h 1. The modified
CC anaphylactic food allergen is useful for preventing or treating allergic
CC reactions associated with any natural allergen such as food, insect,
CC rubber or preferably anaphylactic allergens. It is also useful for
CC treating wounds in mammals such as bovine, canine, feline, caprine,
CC ovine, porcine, murine or equine species. The present sequence is a
CC soybean allergen (e.g. beta-conglycinin or glycinin subunit A2B1a)
XX
SQ Sequence 485 AA;

Query Match 100.0%; Score 42; DB 6; Length 485;
Best Local Similarity 100.0%; Pred. No. 23;
Matches 7; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PNNKPFQ 7
|||||||
Db 54 PNNKPFQ 60

RESULT 13
ADG27563
ID ADG27563 standard; protein; 485 AA.
XX
AC ADG27563;
XX
DT 26-FEB-2004 (first entry)
XX
DE Soybean Glycinin subunit A2B1a.
XX
KW Soybean; plant; allergen; Ara h1; Ara h2; Ara h3; glycinin A2B1a; Jug n1;
KW antiallergic; vulnerary; anaphylactic food allergen; IgE; allergy; wound.
XX
OS Glycine max.
XX
PN US2003202980-A1.
XX
PD 30-OCT-2003.
XX
PF 18-MAR-2002; 2002US-00100303.
XX
PR 29-DEC-1995; 95US-0009455P.
PR 23-SEP-1996; 96US-00717933.
PR 31-JAN-1998; 98US-0073283P.
PR 13-FEB-1998; 98US-0074590P.
PR 13-FEB-1998; 98US-0074624P.
PR 13-FEB-1998; 98US-0074633P.
PR 29-JUN-1998; 98US-00106872.
PR 27-AUG-1998; 98US-00141220.
PR 13-NOV-1998; 98US-00191593.
PR 29-JAN-1999; 99US-00240557.
PR 29-JAN-1999; 99US-00241101.
PR 11-FEB-1999; 99US-00248673.
PR 11-FEB-1999; 99US-00248674.
PR 02-MAR-1999; 99US-0122450P.
PR 02-MAR-1999; 99US-0122452P.
PR 02-MAR-1999; 99US-0122560P.
PR 02-MAR-1999; 99US-0122565P.
PR 02-MAR-1999; 99US-0122566P.
PR 11-MAR-1999; 99US-00267719.
PR 28-JAN-2000; 2000US-00494096.
PR 16-MAR-2001; 2001US-0276822P.
XX
PA (CAPL/) CAPLAN M J.
PA (SOSI/) SOSIN H B.

PA (SAMP/) SAMPSON H.
PA (BANN/) BANNON G A.
PA (BURK/) BURKS A W.
PA (COCK/) COCKRELL G.
PA (COMP/) COMPADRE C M.
PA (CONN/) CONNAUGHTON C.
PA (HELM/) HELM R M.
PA (KING/) KING N E.
PA (KOPP/) KOPPER R A.
PA (MALE/) MALEKI S J.
PA (RABJ/) RABJOHN P A.
PA (SHIN/) SHIN D S.
PA (STAN/) STANLEY J S.
XX
PI Caplan MJ, Sosin HB, Sampson H, Bannon GA, Burks AW, Cockrell G;
PI Compadre CM, Connaughton C, Helm RM, King NE, Kopper RA, Maleki SJ;
PI Rabjohn PA, Shin DS, Stanley JS;
XX
DR WPI; 2003-875632/81.
XX
PT New modified anaphylactic food allergen comprising a cysteine residue
PT which has been modified so that it cannot participate in the disulfide
PT bond, useful for treating allergic reactions or wounds.
XX
PS Example 20; SEQ ID NO 109; 194pp; English.
XX
CC The invention relates to a modified anaphylactic food allergen whose
CC amino acid sequence is substantially identical to that of a natural
CC anaphylactic food allergen. The natural anaphylactic food allergen
CC includes at least one cysteine residue that participates in a disulphide
CC bond when the natural anaphylactic food allergen is in its native
CC conformation, except that the cysteine residue has been modified so that
CC it cannot participate in the disulphide bond. Also included are a method
CC of making a modified anaphylactic food allergen, a nucleotide molecule
CC encoding a modified anaphylactic food allergen defined above, a
CC nucleotide molecule for causing a site specific mutation in a gene
CC encoding a natural anaphylactic food allergen, a transgenic plant or
CC animal expressing a modified anaphylactic food allergen defined above, a
CC method of treating an individual by reducing the clinical response to a
CC natural anaphylactic food allergen by administering a modified
CC anaphylactic food allergen and an isolated fragment of peanut allergen
CC Ara h 1, comprising at least 10 consecutive amino acids of ADG27464 or
CC ADG27465. About 10-17% of the amino acids have been modified in at least
CC one IgE epitope or all the IgE epitopes recognised when the natural
CC anaphylactic food allergen is contacted with serum IgE from individual(s)
CC allergic to the natural anaphylactic food allergen. The invention
CC discloses Peanut allergens Ara h1, Ara h2, Ara h3 (and their encoding
CC cDNAs), Soybean Glycinin A2B1a and IgE-binding epitopes of the English
CC walnut allergen Jug n1. The modified anaphylactic food allergen can be
CC used for treating allergic reactions or wounds. The present sequence
CC represents the soybean allergen Glycinin A2B1a.
XX
SQ Sequence 485 AA;

Query Match 100.0%; Score 42; DB 7; Length 485;
Best Local Similarity 100.0%; Pred. No. 23;
Matches 7; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PNNKPFQ 7
|||||||
Db 54 PNNKPFQ 60

RESULT 14
ADH89247
ID ADH89247 standard; protein; 485 AA.
XX
AC ADH89247;
XX
DT 06-MAY-2004 (first entry)
XX
DE G. max glycinin G2 subunit.
XX
KW double stranded RNA; storage protein; 2S-albumen; 7S-globulin;
KW 11S/12S-globulin; zein-prolamine; homogentistate metabolic pathway;
KW pharmaceutical; plant; abiotic stress; fatty acid composition;
KW lipid composition; oil composition; carbohydrate composition; colour;
KW pigmentation; pathogen resistance; fruit ripening delay; aging;
KW male sterility; lignin; fibre; cotton; Vitamin E synthesis; nicotine;
KW caffeine; theophylline; threonine biosynthesis; glycinin.
XX
OS Glycine max.
XX
PN WO2003078629-A1.
XX
PD 25-SEP-2003.
XX
PF 17-MAR-2003; 2003WO-EP002735.
XX
PR 20-MAR-2002; 2002DE-01012892.
XX
PA (BADI) BASF PLANT SCI GMBH.
XX
PI Kock M, Bauer J;
XX
DR WPI; 2003-803889/75.
DR N-PSDB; ADH89246.
XX
PT Reducing expression of at least two target genes, useful e.g. for
PT producing transgenic plants, using partly double-stranded interfering
PT RNA.
XX
PS Disclosure; SEQ ID NO 22; 228pp; German.
XX
CC This invention describes a novel method for reducing the expression of at
CC least two different endogenous target genes in a eukaryotic cell or
CC organism by introducing an RNA molecule that is at least partly double
CC stranded. The transcribed RNAs from at least two target genes have
CC homology below 90% and the RNA molecule is formed as a single, self-
CC complementary molecule. At least one of the double-stranded structures
CC formed from individual sense sequences has an even number of repeats of
CC 21 or 22 bp. The RNA molecule may include an intron-encoding sequence. At
CC least two target genes are selected from different classes of storage
CC protein genes, i.e. 2S-albumen, 7S- or 11S/12S-globulins or zein-
CC prolamine and at least one of the sense sequences is identical to storage
CC protein sequences or genes in the homogentistate metabolic pathway or
CC enzyme types, e.g. acetyl transacylases, thioesterases, (de)branching
CC enzymes or cellulases. The RNA of the invention, also related cassettes,
CC expression systems, vectors and transgenic organisms are used for
CC preparation of pharmaceuticals, in biotechnological processes and plant
CC biotechnology, specifically in plants to improve protection against
CC abiotic stress, to modify composition and/or content of fatty acids,
CC lipids and oils, to modify carbohydrate composition, to alter colour or
CC pigmentation, to reduce content of storage proteins, to increase
CC resistance to pathogens, to inhibit stem break, to delay fruit ripening
CC or aging, to induce male sterility, to reduce content of toxic or
CC unwanted components, to modify lignification and/or lignin content, to
CC modify the fibre component in foods or fibre quality in cotton, to reduce
CC susceptibility to shock, to increase synthesis of Vitamin E, to reduce
CC contents of nicotine, caffeine or theophylline and to increase methionine
CC content, by reducing threonine biosynthesis. The method provides a rapid
CC and efficient way of reducing gene expression, can inhibit more than one
CC target gene, prevents development of multiple phenotypes (since the
CC transcription rate is the same for all RNA sequences, significantly
CC reducing the selection process required to produce an organism with
CC effective suppression of all target genes), avoids problems of epigenic
CC gene silencing, does not require synthesis of individual RNA sequences
CC and the method can be applied to plants with complex (polyploid) genomes.
CC No interference between the individual RNA sequences occur. This sequence
CC represents a protein encoded by a target gene used in the method of the
CC invention.
XX
SQ Sequence 485 AA;

Query Match 100.0%; Score 42; DB 7; Length 485;
Best Local Similarity 100.0%; Pred. No. 23;

Matches 7; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 PNNKPFQ 7
              |||||||
Db         54 PNNKPFQ 60
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RESULT 15
ADL90186
ID ADL90186 standard; protein; 485 AA.
XX
AC ADL90186;
XX
DT 20-MAY-2004 (first entry)
XX
DE Soybean glycinin G2 protein.
XX
KW immunomodulator; immunotherapy; allergen characterisation;
KW immunoglobulin E; allergen sensitivity; soybean; glycinin G2;
KW acidic protein.
XX
OS Glycine max.
XX
PN US2003166518-A1.
XX
PD 04-SEP-2003.
XX
PF 12-JAN-2001; 2001US-00759967.
XX
PR 13-JAN-2000; 2000US-0175948P.
PR 03-MAR-2000; 2000US-0186724P.
XX
PA (BEAR/) BEARDSLEE T A.
PA (ZEEC/) ZEECE M G.
PA (SARA/) SARATH G.
PA (MARK/) MARKWELL J P.
XX
PI Beardslee TA, Zeece MG, Sarath G, Markwell JP;
XX
DR WPI; 2003-898094/82.
XX
PT Allergen characterization comprises obtaining a recombinant fusion
PT protein and detecting the binding of immunoglobulin E molecules in the
PT biological sample to the recombinant fusion protein.
XX
PS Disclosure; SEQ ID NO 20; 34pp; English.
XX
CC The invention describes a method of allergen characterisation comprising:
CC obtaining a recombinant fusion protein; attaching the recombinant fusion
CC protein to a substrate through the native protein; contacting the
CC recombinant fusion protein attached to the substrate with a biological
CC sample from an individual; and detecting the binding of immunoglobulin E
CC molecules in the biological sample to the recombinant fusion protein.
CC Also described are: a method for determining the sensitivity of an
CC individual to a suspected allergen; a method for determining the amount
CC of immunoglobulin E specific for an allergen in a biological sample; a
CC method of immunotherapy; a method of allergen characterisation; a method
CC for determining the sensitivity of an individual to a suspected allergen;
CC a method of determining the amount of immunoglobulin E specific for an
CC allergen in a biological sample; a kit comprising the recombinant fusion
CC protein and instructions for using the recombinant fusion protein to
CC determine IgE binding to the know or suspected allergen; and a method for
CC epitope determination. The method is useful for characterising allergens.
CC This is the amino acid sequence of soybean glycinin G2 acidic protein
CC that can be used to demonstrate the methods of the invention.
XX
SQ Sequence 485 AA;

Query Match 100.0%; Score 42; DB 7; Length 485;
Best Local Similarity 100.0%; Pred. No. 23;
Matches 7; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 PNNKPFQ 7
              |||||||
Db         54 PNNKPFQ 60
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Job time : 89.7188 secs